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CLAIM AMENDMENTS

Please amend claims 15-28, without prejudice or disclaimer, as indicated below, such that after entry of the amendment the claims remaining under consideration read as follows:

15. (Currently Amended) Braking force amplifier with dual amplification ratios comprising:

a piston operated by a pressure differential between a front chamber and a back chamber;

a plunger mounted to be axially displaceable in said piston between positions controlling the evolution of said pressure differential by switching means, said plunger operably attached to a brake pedal; and

B₁ a thrust assembly comprising a reaction rod operably connected to a master-cylinder of corresponding brakes and mounted to be axially displaceable under control of the plunger between a first braking state corresponding to a first amplification ratio of a braking force and a second braking state corresponding to a second amplification ratio of the braking force, and a deformable reaction disc interposed between the piston and the plunger and said reaction rod,

wherein said ~~thrust assembly includes means for absorbing deformations of the reaction disc said deformations deformable reaction disc forms around said piston and within said thrust assembly when the pressure differential acts on said piston, said deformable reaction disc deforming based on the amount of the pressure differential, and said deformable reaction disc contributing to determining a braking force at which passage from the first braking state to the second braking state takes place.~~

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16. (Currently Amended) Amplifier as described in claim 15, wherein the deformations are a function of stiffness of the reaction disc.

17. (Currently Amended) Amplifier as described in claim 15, wherein the piston includes a piston bearing surface in physical contact with a thrust assembly bearing surface, wherein an area of contact between the piston bearing surface and the thrust assembly bearing surface determines the second amplification ratio, and a distance (X) between the piston bearing surface and the thrust assembly bearing surface, at rest, determines the braking force at which the passage from the first braking state to the second braking state takes place.

18. (Currently Amended) Amplifier as described in claim 15, wherein the piston bearing surface and the thrust assembly bearing surface are annular and co-axial.

19. (Currently Amended) Amplifier as described in claim 15, wherein the reaction disc is arranged in a housing formed in a head at an end of the reaction rod, said housing providing a cavity forming said means for absorption of said deformations.

20. (Currently Amended) Amplifier as described in ~~claim 5~~ claim 19, wherein the housing is suitable to receive an end of the piston, said housing having a dimension greater than that of the end of the piston to provide the cavity for absorption of the deformations of the reaction disc.

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21. (Currently Amended) Amplifier as described in ~~claim 4~~ claim 18, wherein the reaction rod includes at an end a head mounted to be axially displaceable within a sleeve provided with a flange forming an orifice in which an end of the piston slides, and a bearing surface the reaction disc being housed within the sleeve, said reaction disc bearing on the head and on the bearing surface of the flange, said bearing surface of the flange co-operating with the end of the piston on displacement of the piston to form said means for absorption of the deformation of the reaction disc.

22. (Currently Amended) Amplifier as described in ~~claim 7~~ claim 21, wherein the orifice formed by the flange of the sleeve is circular and the end of the piston able to slide in said orifice is cylindrical.

23. (Currently Amended) Amplifier as described in ~~claim 8~~ claim 22, wherein elastic means are mounted within the sleeve bearing on a face of the head of the reaction rod opposite to the reaction disc and on a stop operably attached to the sleeve to apply a return force to said sleeve.

24. (Currently Amended) Amplifier as described in ~~claim 9~~ claim 23, wherein the elastic means comprise a conical washer.

25. (Currently Amended) Amplifier as described in ~~claim 10~~ claim 24, wherein the sleeve includes a shoulder operable to be a travel limit stop to the head of the reaction rod in the absence of braking.

~~12~~ 26. (Currently Amended) Amplifier as described in ~~claim 11~~ claim 25, wherein the reaction disc is incompressible.

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26 27. (Currently Amended) Amplifier as described in ~~claim 12~~ claim 26, wherein
the first amplification ratio is constant.

27 28. (Currently Amended) Amplifier as described in ~~claim 13~~ claim 27, wherein
the second amplification ratio is constant.

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INTRODUCTORY COMMENTS

The present amendment replies to a Non-Final Office Action dated May 7, 2003. In the Non-Final Office Action, Examiner Lopez asserted the following rejections and objections of pending claims 15-28:

- A. Claims 12, 26, and 27 were objected to as not in accordance with 37 CFR 1.126.
- B. Claims 16-28 were rejected under 35 U.S.C. §112, second paragraph.
- C. Claim 15 was rejected under 35 U.S.C. §102(b) as anticipated by any one of US Patent number 5,425,302 to Levrai, et al, US Patent number 5,794,506 to Inoue, et al, US Patent number 5,884,548 to Ando, et al, US Patent number 5,943,937 to Endo, et al, Japan 10230841, and Applicants admitted prior art (FIG. 1).
- D. Claim 15 was rejected under 35 U.S.C. §102(e) as anticipated by US Patent number 6,192,783 B1 to Tobisawa.

Claims 15-28 have been amended herein. Withdrawal of the objections under 37 CFR 1.126 to the previously misnumbered claims 12, 26, and 27 as renumbered claims 26, 27, and 28 is respectfully requested. Withdrawal of the rejection of claims 16-28 under 35 U.S.C. §112 is therefore respectfully requested. Withdrawal of the rejections of claim 15 under 35 U.S.C. §102(b) and §102(e) is therefore respectfully requested. The Applicants respectfully request reconsideration and further examination of the present application under 37 CFR §1.112.